

Reply to Office Action of February 16, 2007

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A filter for washing machine, comprising:
  - a cap fitted to a filter case having an opening via which water passes;
  - a shaft extending from a bottom of the cap; and
  - a funnel shaped extension extending from an end of the shaft, the extension disposed to confront the opening so as to filter particles ~~included in the~~from water flowing between the extension and the filter case, the extension having a protrusion protruding from a side of the extension opposite to the cap, wherein the protrusion extends away from the cap and has a diameter that is smaller than a largest diameter portion of the extension.
2. (Original) The filter as claimed in claim 1, wherein a circumferential cross-section of the protrusion is a closed curve.
3. (Original) The filter as claimed in claim 1, wherein the protrusion has a ring type circumferential cross-section.

Reply to Office Action of February 16, 2007

4. (Previously Presented) The filter as claimed in claim 1, wherein a diameter of the funnel shaped extension increases in a direction extending away from the cap.

5. (Original) The filter as claimed in claim 1, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening.

6. (Currently Amended) A filter assembly for a washing machine, comprising:  
a filter case comprising:  
an inlet and an outlet on a circumference; and  
an opening inside to make the inlet and outlet communicate with each other; and  
a filter loaded in the filter case, the filter comprising:  
a cap fitted to the filter case;  
a shaft extending from a bottom of the cap; and  
~~a solid walled~~ an extension comprising a continuous solid walled structure  
extending from ~~an~~ a distal end of the shaft, wherein the extension is disposed to confront the opening so as to filter particles in water passing through the filter case, the extension having a protrusion protruding from a side of the extension opposite to the cap.

7. (Original) The filter assembly as claimed in claim 6, wherein a circumferential cross-section of the protrusion is a closed curve.
8. (Original) The filter assembly as claimed in claim 6, wherein the protrusion has a ring type circumferential cross-section.
9. (Original) The filter assembly as claimed in claim 6, wherein the extension has a funnel figure.
10. (Original) The filter assembly as claimed in claim 6, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening.
11. (Original) The filter assembly as claimed in claim 6, wherein the filter case is cylindrical.
12. (Original) The filter assembly as claimed in claim 6, wherein the inlet is provided to the circumference of the filter case in a tangential direction.
13. (Original) The filter assembly of claim 6, wherein the filter comprises:  
a tube having the inlet and outlet on the circumference;

a partition wall provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and the opening perforating the partition wall.

14. (Currently Amended) A washing machine comprising:
- a cabinet;
  - a tub provided in the cabinet;
  - a drum rotatably installed in the tub;
  - a filter assembly provided in the cabinet to filter water discharged from the tub, the filter assembly comprising:
    - a filter case comprising:
      - an inlet and an outlet on a circumference: and
      - an opening inside to make the inlet and outlet communicate with each other; and
    - a filter loaded in the filter case, the filter comprising:
      - a cap fitted to the filter case;
      - a shaft extending from a bottom of the cap; and
      - ~~a solid walled~~ an extension comprising a continuous solid walled structure extending from ~~an~~ a distal end of the shaft, the extension disposed to confront the

Reply to Office Action of **February 16, 2007**

opening to filter particles in ~~the water passing through the filter case~~, the extension having a protrusion protruding from a side of the extension opposite to the cap.

15. (Original) The washing machine as claimed in claim 14, wherein a circumferential cross-section of the protrusion is a closed curve.

16. (Original) The washing machine as claimed in claim 14, wherein the protrusion has a ring type circumferential cross-section.

17. (Original) The washing machine as claimed in claim 14, wherein the extension has a funnel figure.

18. (Original) The washing machine as claimed in claim 14, wherein a diameter of an end portion of the extension is equal to or greater than a diameter of the opening.

19. (Original) The washing machine as claimed in claim 14, wherein the filter case is cylindrical.

20. (Original) The washing machine as claimed in claim 19, wherein the inlet is provided to the circumference of the filter case in a tangential direction.

21. (Original) The washing machine of claim 14, wherein the filter case comprises:
- a tube having the inlet and outlet on the circumference;
  - a partition wall provided in the tube to partition an internal space of the tube into first and second chambers communicating with the inlet and outlet, respectively; and
  - the opening perforating the partition wall.
22. (Previously Presented) A filter for a washing machine, comprising:
- a filter case having a filter chamber, wherein an opening in the case acts as an outlet from the filter chamber;
  - a filter element mounted in the filter chamber, wherein the filter element comprises:
    - a cap;
    - a shaft that extends from the cap; and
    - an extension formed on an end of the shaft opposite the cap, wherein the extension comprises a generally conical shaped solid surface having a diameter that increases in a direction extending away from the cap, and wherein the largest diameter portion of the extension is positioned immediately adjacent the opening in the case.

23. (Currently Amended) The filter of claim 22, wherein the solid surface of the extension is configured to force all water escaping from the filter chamber through the opening to pass around exterior edges of the largest diameter portion of the extension.

24. (Previously Presented) The filter of claim 22, wherein a largest diameter portion of the extension has a diameter that is greater than a diameter of the opening in the case.

25. (Previously Presented) The filter of claim 22, wherein the filter element further comprises a protrusion formed on a side of the extension opposite the cap, and wherein the protrusion extends from the extension in a direction opposite the cap.

26. (Previously Presented) The filter of claim 25, wherein the protrusion has a circular profile with a diameter that is smaller than the largest diameter portion of the extension.

27. (Previously Presented) The filter of claim 25, wherein the protrusion is surrounded by the largest diameter portion of the extension.

28. (Previously Presented) The filter of claim 25, wherein the largest diameter portion of the extension has a diameter that is larger than a diameter of the opening in the case, and wherein a diameter of the protrusion is smaller than the diameter of the opening.

29. (Previously Presented) The filter of claim 1, wherein the extension comprises a solid surface that is configured such that water passing through the opening is forced to move around outside edges of the extension.

30. (Previously Presented) The filter of claim 2, wherein external edges of the extension and the protrusion form concentric circles.

31. (Previously Presented) The filter of claim 6, wherein the protrusion extends from the extension in a direction opposite the cap.

32. (Previously Presented) The filter of claim 31, wherein a largest diameter portion of the extension surrounds the protrusion.

33. (Previously Presented) The filter of claim 14, wherein the protrusion extends from the extension in a direction opposite the cap.

34. (Previously Presented) The filter of claim 33, wherein a largest diameter portion of the extension surrounds the protrusion.



35. (New) The filter as claimed in claim 1, wherein the protrusion extends directly from an inner surface of the funnel shaped extension.

36. (New) The filter as claimed in claim 1, wherein the extension comprises a continuous solid walled structure that extends from a distal end of the shaft.

37. (New) The filter assembly as claimed in claim 6, wherein the extension filters particles from water flowing between an outer peripheral edge of the extension and an inner surface of the filter case.

38. (New) The filter assembly as claimed in claim 9, wherein the protrusion extends directly from an inner circumferential surface of the funnel figure of the extension.

39. (New) The washing machine as claimed in claim 14, wherein the extension filters particles from water flowing between an outer peripheral edge of the extension and an inner surface of the filter case.

40. (New) The washing machine as claimed in claim 17, wherein the protrusion extends directly from an inner surface of the funnel shaped extension.

41. (New) The filter as claimed in claim 22, wherein the extension comprises a continuous solid walled structure that extends from a distal end of the shaft.

42. (New) The filter as claimed in claim 22, wherein the extension filters particles from water flowing between an outer peripheral edge of the extension and an inner surface of the filter case.

43. (New) The filter as claimed in claim 23, wherein a gap is formed between an outer peripheral edge of the largest diameter portion of the extension and a wall of the filter case such that water from the filter chamber flows into the opening through the gap.